

# Work Order ID 79068

\*79068\*

33"

Page 1

January-19-12 10:02:59 AM

Item ID: D2916-5

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Stop \*NS2\*

Item Name: Cable Guard, 212 Skidtube

Start Date: 19/01/2012 Start Qty: 4.00

\*4\*

Cust Item ID:

Required Date: 26/01/2012 Req'd Qty: 4.00

\*4\*

Customer:

Reference:

Approvals: Process Plan: M.C.5

Date: 12/01/19

Tooling:

Date:

Run Start \*NR1\*

QC:

Date:

SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr

Revision Nbr

D2916

Rev D

100

0.00

\*100\*

FLOW WATER JET

Waterjet

Memo

0.00

FLOW CNC Waterjet

1-Cut as per Dwg D2916 Dwg Rev: D Prog Rev: D 2-  
Deburr if necessary

B2-1-19

(5)

110

QC2- Inspect parts off machine FAI/FAIB

0.00

\*110\*

QC

Memo

0.00

Quality Control

B12-1-19

120

0.00

\*120\*

HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

BATCH: 120038 1- Mill as per Folio FB077 Rev: AA  
& Dwg D2916 Rev: D 2-Deburr per dwg D2916

12-01-26 (X5)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 79068

**\*79068\***

Page 2

January-19-12 10:02:59 AM

Item ID: D2916-5

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Cable Guard, 212 Skidtube

Start Date: 19/01/2012 Start Qty: 4.00 **\*4\***

Cust Item ID:

Required Date: 26/01/2012 Req'd Qty: 4.00 **\*4\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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130 QC2- Inspect parts off machine FAI/FAIB 0.00

**\*130\***

QC Memo 0.00

Quality Control

*OK/BA 12-01-26*

140 QC8- Inspect parts - second check 0.00

**\*140\***

QC Memo 0.00

Quality Control

*BA 12/01/29*

*5 0*

150 Identify as per dwg & Stock Location: \_\_\_\_\_ 0.00

**\*150\***

Packaging Memo 0.00

Packaging

*12/1/30 8/30*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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NOTE: Date & initial all entries

**Work Order ID 79068****\*79068\***

Page 3

January-19-12 10:02:59 AM

Item ID: D2916-5

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Cable Guard, 212 Skidtube

Start Date: 19/01/2012 Start Qty: 4.00

**\*4\***

Cust Item ID:

Required Date: 26/01/2012 Req'd Qty: 4.00

**\*4\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

160

QC21- Final Inspection - Work Order Release

0.00

**\*160\***

QC

Memo

0.00

Quality Control

12/1/30 J

R1201-30  
(5)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

January-19-12 10:03:03 AM

Page 1

Work Order ID: 79068

\*79068\*

Parent Item: D2916-5

\*D2916-5\*

Parent Item Name: Cable Guard, 212 Skidtube

Start Date: 19/01/2012

Required Date: 26/01/2012

Start Qty: 4.00

Required Qty: 4.00

## Comments:

IPP Rev:A New Issue 06-06-19 JLM

IPP Rev:B Now water jet 06-07-14 EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB10		Purchased	No			100	sf	377.8243	0.4	1.684211			

\*MUHMWB10\*

UHMW 1" Black

\*\*

1812-1-19

## Location

## Loc Qty

## Loc Code

MAT018

118.18

120035

118.18

MAT019

259.6443158

117321

74.6

117738

95.8

117819

83.3

118814

1.5

119145

4.44431579

120935

5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries





<b>DART AEROSPACE LTD</b>		<b>Work Order:</b>	79068
<b>Description:</b> Cable Guard		<b>Part Number:</b>	D2916-5
<b>Inspection Dwg:</b> D2916	<b>Rev:</b> 8		
			<b>Page 1 of 1</b>

☒ First Article ☐ Prototype

[illegible]

Measured by: 	Audited by: 	Prototype Approval:	N/A
Date: 12-01-24	Date: 12/01/29	Date:	N/A

Rev	Date	Change		Revised by	Approved
A	04.01.12	New Issue	P/O D205-665-015	KJ/RF 	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8 7 6 5 4 3 2 1

D

D

C

C

B

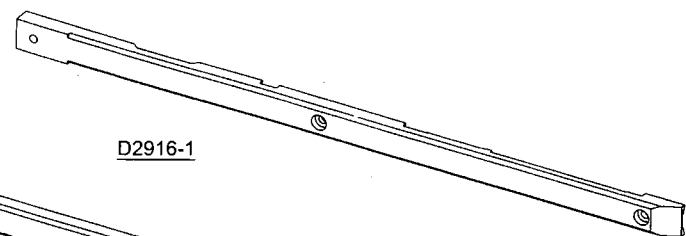
B

A

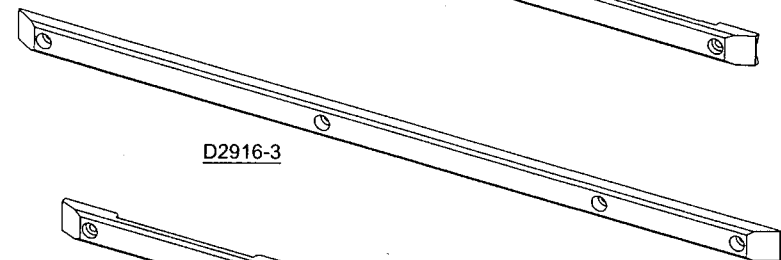
A

UNC  
S1

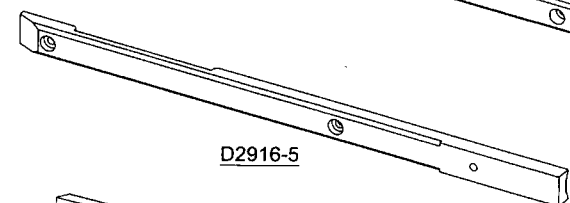
79.06.8 M.CJ  
12/01/19



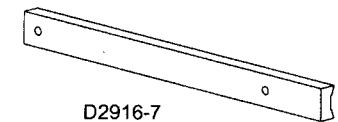
D2916-1



D2916-3



D2916-5



D2916-7



RELEASED  
2011-11-02  
MP

NOTES:

- 1) MATERIAL: UHMW BLACK TIVAR 1000 VIRGIN MATERIAL  
REF DART SPEC MUHMB10
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL UNMARKED RADII 0.020 TO 0.040
- 6) IDENTIFICATION: ENGRAVE P/N ON LOWER SIDE TO MAX DEPTH OF 0.010 AND MIN RADIUS OF 0.010
- 7) WEIGHT:

D2916-1 = 1.37 lbs  
D2916-3 = 2.33 lbs  
D2916-5 = 1.19 lbs  
D2916-7 = 0.96 lbs

- 8) ENGRAVE TWO DART LOGOS (OPPOSITE AS SHOWN) ON UPPER SIDE TO MAX DEPTH OF 0.015 AND MIN RADIUS OF 0.250
- 9) MACHINE CONSTANT SECTION A-A
- 10) MACHINE CONSTANT SECTION B-B
- 11) MACHINE CONSTANT SECTION C-C
- 12) MACHINE CONSTANT SECTION F-F
- 13) MACHINE CONSTANT SECTION G-G
- 14) 25° ANGLE OF TRANSITION BETWEEN SECTIONS WITH MIN RADIUS OF 0.50
- 15) 50° ANGLE OF TRANSITION BETWEEN SECTIONS WITH MIN RADIUS OF 0.50
- 16) MACHINE SLOT WITH 0.063 RADIUS OF TRANSITION BETWEEN SECTIONS
- 17) ALL HOLES DRILLED ON CENTERLINES

D	REVISE MACHINE SLOT. (ZN C5-2, C4-4, C4-5, C6-5) REVISE SECTIONS D-D, L-L, N-N	RF	11.10.07	
C	REVISE D-D; ADD L-L, M-M & N-N; FOR D4406-041/-043 COMPATIBILITY	RF	11.08.17	
B	ADD K-K FOR D2521 COMPATIBILITY	CP	00.02.24	
A	NEW ISSUE	CP	99.09.29	
REV.	DESCRIPTION	BY	DATE	
DESIGN		<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA		
DRAWN				RF
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MFG. APPR.				
APPROVED				
DE APPR.				
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		DRAWING NO. D2916	REV. D SHEET 1 OF 6	
		TITLE CABLE GUARD	SCALE NTS	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

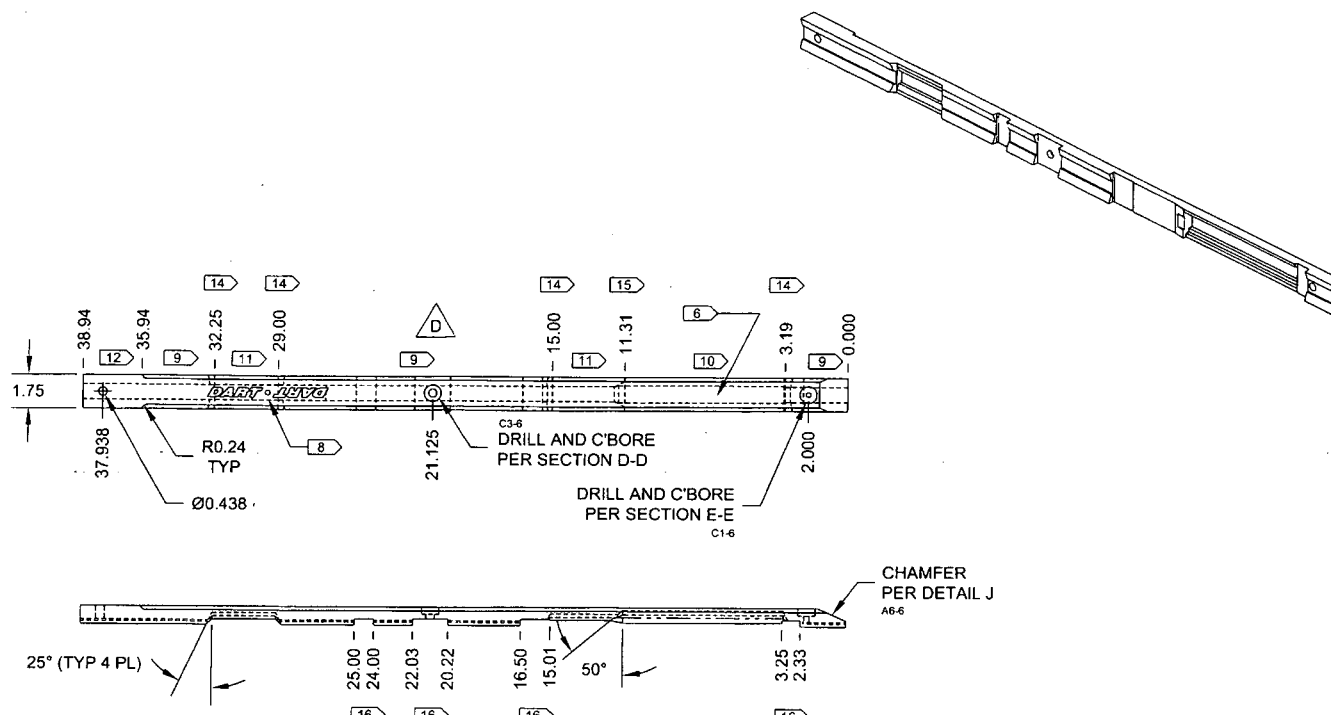
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

79008



**D2916-1**

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2011-11-02

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MFG. APPR.	<del>RF</del>	D2916	SHEET 2 OF 6
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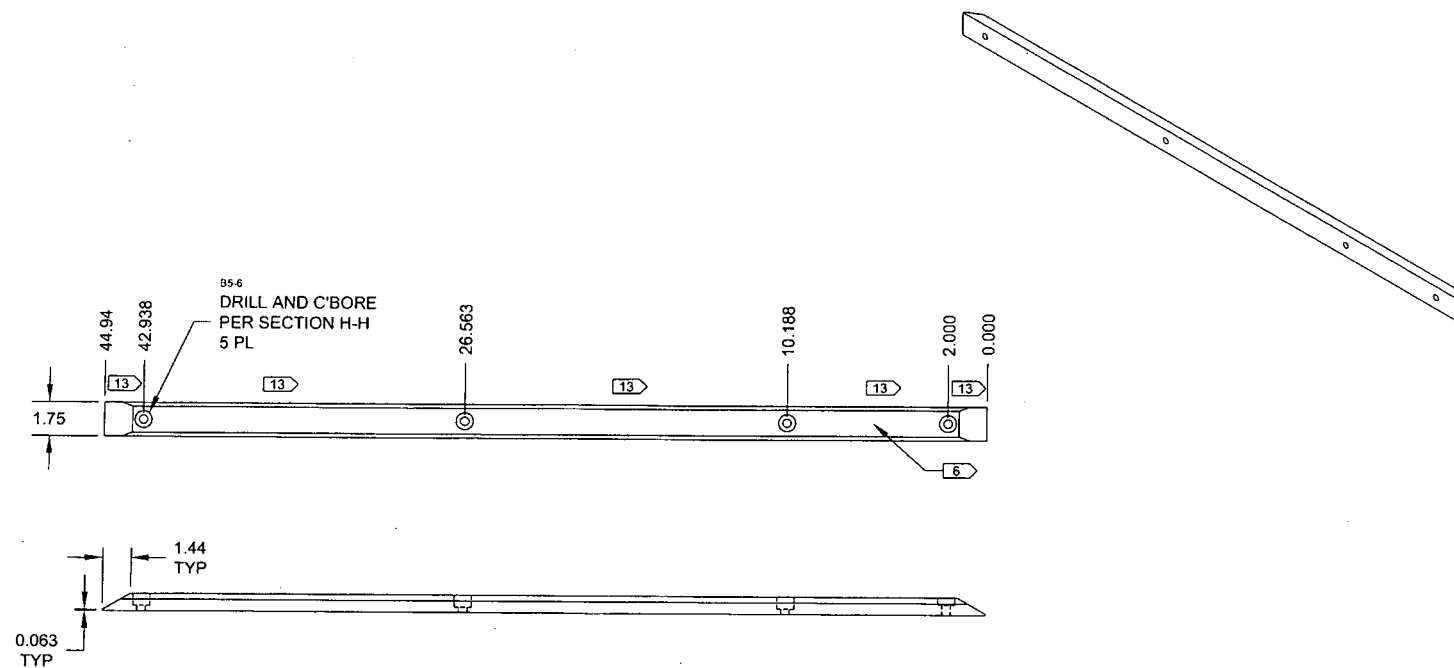
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

79068



D2916-3

RELEASED  
2011-11-02  
JMD

DESIGN	#	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
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MFG. APPR.	#	D2916	SHEET 3 OF 6
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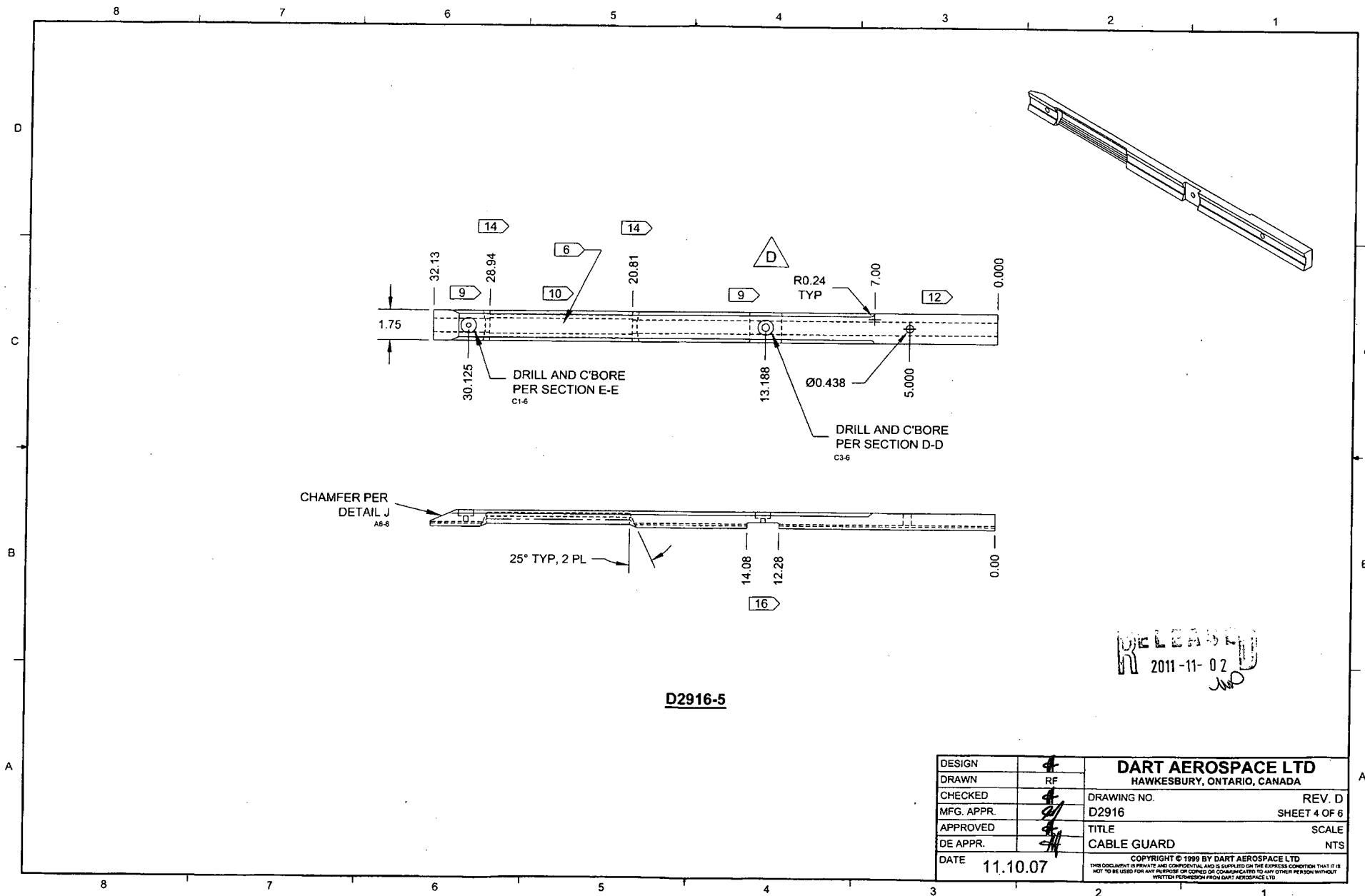
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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79068



DESIGN	4	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
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MFG. APPR.	4	D2916	SHEET 4 OF 6
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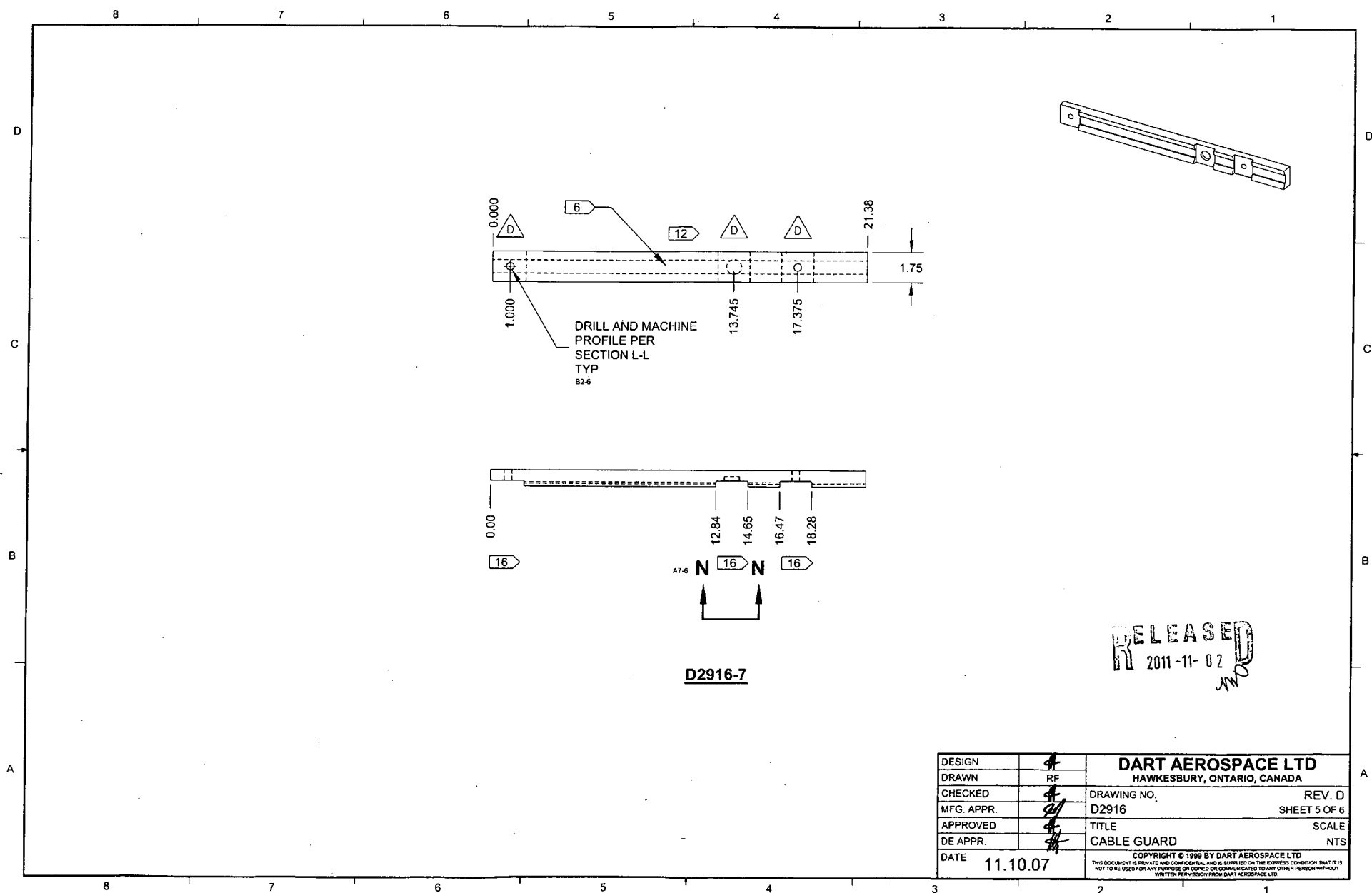
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2011-11-02  
NO

DESIGN	#	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	#	DRAWING NO.	REV. D
MFG. APPR.	#	D2916	SHEET 5 OF 6
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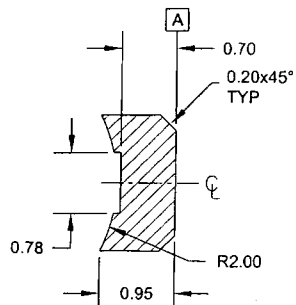
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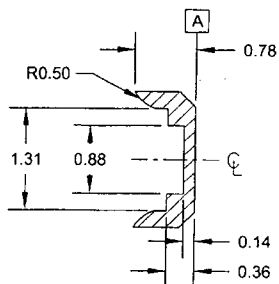
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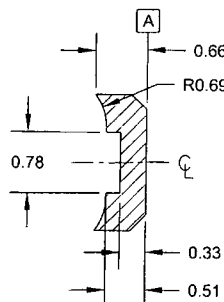
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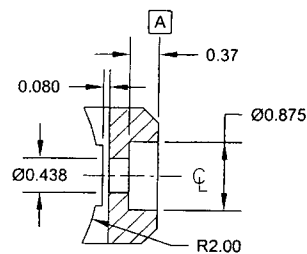
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C3-2  
C5-2  
C4-4  
C5-4



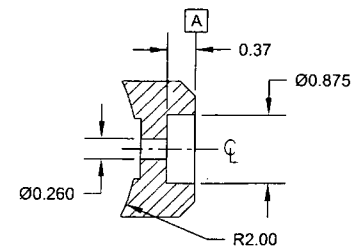
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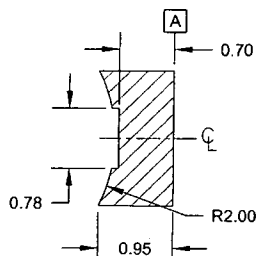
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C4-2



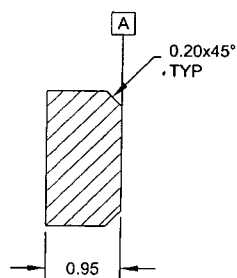
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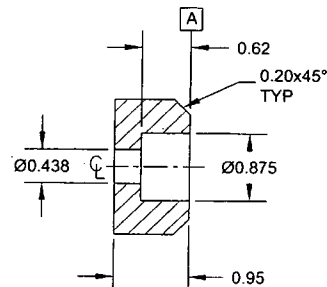
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C3-2  
C5-4



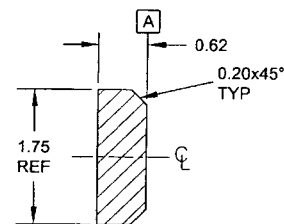
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C3-2  
C3-4  
C5-5



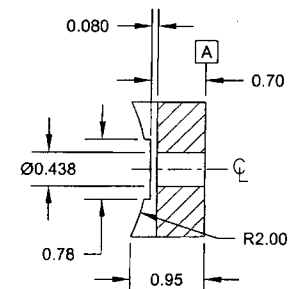
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C3-3  
C4-3  
C5-3  
C6-3  
C7-3



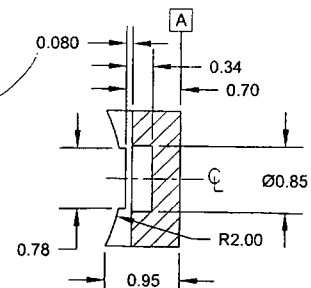
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SCALE 4X  
C6-3



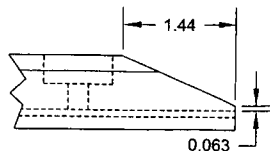
SECTION K-K  
SCALE 4X  
B3-2  
B4-2  
B5-2



SECTION L-L  
SCALE 4X  
C5-5



SECTION N-N  
SCALE 4X  
B6-5



DETAIL J  
SCALE 4X  
B3-2  
B7-4

RELEASED  
2011-11-02

DESIGN	4	DART AEROSPACE LTD	
DRAWN	RF	HAWKESBURY, ONTARIO, CANADA	
CHECKED	4	DRAWING NO.	REV. D
MFG. APPR.	4	D2916	SHEET 6 OF 6
APPROVED	4	TITLE	SCALE
DE APPR.	4	CABLE GUARD	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries